

Two new species of *Rutidosis* DC. (Asteraceae: Gnaphalieae) from Queensland

Ailsa E. Holland

Summary

Holland, Ailsa E. (1994). Two new species of *Rutidosis* DC. (Asteraceae: Gnaphalieae) from Queensland. *Autrobaileya* 4(2): 199–203. *Rutidosis crispata* and *R. lanata* from south eastern Queensland are described. Conservation codings of 2K and 2E respectively, are suggested. A key to the species of *Rutidosis* in south eastern Queensland is given.

Keywords: Asteraceae, *Rutidosis* – Queensland, *Rutidosis crispata*, *Rutidosis lanata*.

Ailsa E. Holland, Queensland Herbarium, Meiers Road, Indooroopilly, Qld 4068, Australia

Introduction

The genus *Rutidosis* DC. is an endemic Australian genus. According to Anderberg (1991) and Wilson (1992), *Rutidosis* is a polyphyletic grouping that is partly congeneric with *Acomis* F. Muell. The two new species are here treated as belonging to *Rutidosis* in the broad sense.

***Rutidosis crispata* A.E.Holland, sp. nov.**
maxime arcte affinis *R. leucanthae* F.Muell. et *R. lanatae* A.E.Holland; a *R. leucantha* foliis ellipticis, corollis luteis, et pappi squamis acutis differt; a *R. lanata* involucri bracteis non lanatis, capitulis parvioribus (4–10 mm in diametro) et flosculis paucioribus (9–22) differt.
Typus: Queensland. LEICHHARDT DISTRICT: Glenmoral Gap, 13 km WSW of Theodore, 13 Sep 1986, *P.I. Forster* 2639 (holo: BRI (AQ379827); iso: CANB, K, MO, US).

Erect herbaceous perennial to 35 cm high. Stems single and woody at base, much branched above; branches thin, densely white woolly hairy. Leaves all cauline, alternate, sessile, elliptic, 0.7–2.8 cm long, 1.5–6 mm wide, with finely undulate or crisped margins, acute and apiculate at apex; lower surface white, densely woolly hairy; upper surface green, sparsely hairy with a mixture of multicellular scabrous and longer woolly hairs; 1-veined. Inflorescences mainly

in upper axils; peduncles 2–5.5 cm long, sparsely to densely white woolly hairy, not scaly; capitula campanulate, 4–10 mm diam. with 2 or 3 rows of involucre bracts and 9–22 florets. Outer involucre bracts ovate or obovate, 0.8–4 mm long, 0.5–1.5 mm wide, entire or somewhat lacerate at apex, acute or obtuse; proximal part with an obovate stereome 0.5–2.5 mm long, and surface green or pale brown with short glandular hairs; margin and distal parts scarious, glabrous, sparsely glandular, pale brown, translucent. Inner involucre bracts similar, obovate, 4–6 mm long, 1–1.5 mm wide, tapered and entire or lacerate at apex; stereome 3–5 mm long; margin and distal parts scarious. Receptacle domed, 1–1.5 mm diam., glabrous. Florets all bisexual, actinomorphic, longer than the involucre bracts; corolla 4–4.5 mm long, yellow, glabrous; tube narrowed below, dilated above; dilated part 2.5–3 mm long; lobes 5, triangular, 0.8–1.4 mm long, glabrous. Anthers with triangular apical appendage, c. 0.1 mm long; collar c. 2 mm long; tails fine, linear, c. 0.5 mm long. Style arms elongated, 1.2–1.5 mm long; apex tapered and papillose; stigmatic patches in lower 1/3–1/2. Cypsela obovoid, 2–2.5 mm long, 1–1.5 mm wide, truncate or rounded at apex; pericarp crustaceous, dark brown, glabrous, densely covered with prominent, non glandular tubercles; seed free from pericarp; testa membranous; pappus scales 6–8, linear, 1–1.3 mm long, entire or slightly irregularly lacerated at apex, acute, white or slightly yellowish. **Fig. 1.**

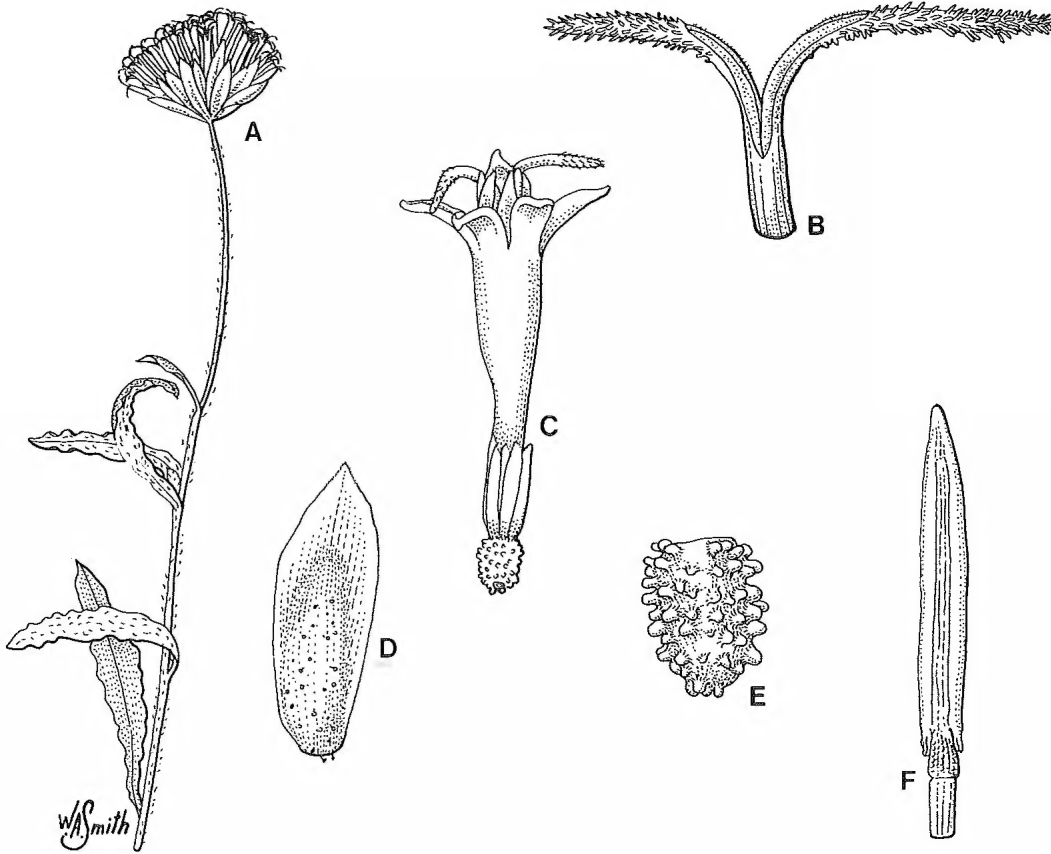


Fig. 1. *Rutidosus crispata*: A. portion of flowering stem $\times 2$. B. style arms $\times 25$. C. floret with cypselum and pappus scales $\times 10$. D. outer involucre bract $\times 10$. E. cypselum $\times 25$. F. anther $\times 25$ (from P.I. Forster 2639, BRI).

Other specimens examined: Queensland, LEICHHARDT DISTRICT: Glenmoral Gap, 13 km WSW of Theodore, Jan 1987, Forster 2862 (BRI, CANB, MEL); Glenmoral Gap, 13 km WSW of Theodore, Oct 1993, Forster 14076 & Holland (BRI, CANB, K, MEL, NSW).

Distribution and habitat: This species was first collected from Glenmoral Gap in the Dawson Range by P.I. Forster in 1986. It is presently known only from this single locality. It occurs on a ridge top, in shallow sandy soil on sandstone, in open eucalypt forest dominated by *Eucalyptus suttelgens*, *E. tenuipes* & *E. trachyphloia*, with an understorey of *Triodia* sp.

Phenology: Flowers occur from September to January.

Conservation status: This species is presently known only from the type locality and should be considered rare. The type locality is not a

conserved area, but the species does not appear to be under threat of destruction unless land use or management practices in the area are changed. Thorough searches in the Dawson Range and adjacent areas in central Queensland may reveal further populations. The suggested conservation code is, therefore, 2K using the criteria of Briggs and Leigh (1988).

Etymology: The specific epithet is derived from the Latin *crispus*, crisped or irregularly waved, referring to the irregularly undulate or crisped leaf margins.

Rutidosis lanata A.E. Holland, *sp. nov.*, maxime arcte affinis *R. leucanthae* F. Muell. et *R. crispatae* A.E. Holland; a *R. leucantha* foliis ellipticis, corollis luteis, et pappi squamis acutis differt; a *R. crispata* involucri bracteis lanatis, capitulis

majoribus (8–16 mm in diametro) et flosculis pluribus (33–40) differt. **Typus:** Queensland. MARANOVA DISTRICT: 3 km N of Jackson on the road to Wandoan, 3 Nov 1993, *A.E. Holland* 1087 & *M.A. McGowan* (holo: BRI (AQ 621988); iso: CANB, K).

[*Rutidosia leucantha* auct. non F. Muell.: Stanley, T.D. & Ross, E.M., *Flora of South-eastern Queensland* 2:543, 550, fig. 76 D (1986)].

Erect herbaceous perennial, to 30 cm high. Stems single and woody at base, branched above, densely white woolly hairy. Leaves all cauline, alternate, sessile, elliptic or oblanceolate, 1.2–4.5 cm long, 3–9 mm wide, with entire or with slightly undulate margins, acute or obtuse at apex; lower surface white, densely woolly hairy; upper surface green, moderately hairy with a mixture of scabrid multicellular hairs and longer woolly hairs. Lower leaves 3-veined from base and somewhat stem clasping. Inflorescences mostly in upper axils; peduncles 1–5 cm long, densely white woolly hairy, not scaly; capitula campanulate to hemispherical, 8–16 mm diam., with several rows of involucre bracts and 33–40 florets. Outer involucre bracts obovate, 2.5–5 mm long, 1.5–3 mm wide, entire, sometimes lacerate at apex, obtuse or acute; proximal part with an ovate or obovate stereome 1–3 mm long and 1–2 mm wide, and surfaces green or golden brown, densely woolly hairy interspersed with short glandular hairs; margins and upper parts scarious, translucent, pale brown, sparsely woolly hairy. Inner involucre bracts similar, lanceolate to linear, 4–8 mm long, 1–1.5 mm wide, acute or tapered, sometimes lacerate at apex; stereome 1.5–2.4 mm long, with a few woolly hairs and glands on surface; margin and distal parts scarious, glabrous. Receptacle domed, 2–2.5 mm diam., glabrous. Florets all bisexual, actinomorphic, longer than involucre bracts; corolla 4–4.5 mm long, yellow, glabrous; tube narrowed below, dilated above, dilated part 2.5–3 mm long, c. 0.7 mm wide; lobes 5, triangular, 1.0–1.5 mm long, glabrous. Anthers with triangular apical appendage, c. 0.5 mm long; collar c. 2.2 mm long; tails fine, linear, c. 0.5 mm long. Style arms elongated, 2–3 mm

long; apex tapered and papillose; stigmatic patches in lower 1/3–1/2. Cypselas obovoid, 2.2–3.0 mm long, 0.8–1.5 mm wide, truncate at apex; pericarp crustaceous, dark brown, glabrous, densely covered with prominent non-glandular tubercles; seed free from pericarp; testa membranous; pappus scales 8–12, linear, 0.7–1.3 mm long; entire or sometimes slightly irregularly lacerated at apex, acute, white or slightly yellowish. **Fig. 2.**

Other specimens examined: Queensland. MARANOVA DISTRICT: Yuleba Forestry Road between Condamine Highway and Clayhole Creek, Nov 1958, *Johnson* 649 (BRI); N of Jackson, Mar 1953, *Blake* 19149 (BRI). DARLING DOWNS DISTRICT: About 9 miles [15.2 km] S of Meandarra, Mar 1959, *Johnson* 735 (BRI, NSW); 'Woodlands', 5 miles [8 km] SW of Westmar, Dec 1958, *Pedley* 358 (BRI); Glenoie, near Hannaford, Apr 1939, *Everist* 17872 (BRI).

Distribution and habitat: This species had been collected from only five locations on the western Darling Downs (given above). A recent intensive survey of the area has relocated the species at only two of the five localities, near Meandarra and north of Jackson. It occurs in remnant roadside vegetation, on sand ridges and sandy clay flats, under *Eucalyptus* and *Acacia* species.

Phenology: Flowers occur from October to March.

Conservation status: This new species is both rare and endangered. In the recent survey of the western Darling Downs (November 1993) only two small populations, each less than 100 individuals were located within 5 m of the road edge and adjacent to cleared or partly cleared farm and grazing land. The western Darling Downs has been cleared extensively and only a few areas of native forest remain. Although this species was collected in Yuleba State Forest in 1958, it could not be relocated there at the time of the recent survey. The suggested conservation status is, therefore, 2E using the criteria of Briggs and Leigh (1988).

Etymology: The specific epithet is derived from the latin *lana*, wool, referring to the distinctive woolly hairy involucre bracts of the capitula.

Notes: Examination of type material of *Rutidosia leucantha* F. Muell. from MEL revealed that specimens at BRI previously ascribed to



Fig. 2. *Rutidosus lanata*: A. flowering stem $\times 1$. B. style arms $\times 25$. C. floret with cypsela and pappus scales $\times 10$. D. outer involucre bract $\times 10$. E. cypsela $\times 25$. F. anther $\times 25$. (from *R.W. Johnson* 649, BRI).

R. leucantha belong to *R. lanata*, and that other specimens segregated as a possible new species are correctly *R. leucantha*. Thus the taxon called *R. leucantha* in *Flora of South-eastern Queensland* by Stanley and Ross in 1986 is correctly *R. lanata*.

R. crispata and *R. lanata* are most closely related to each other, sharing a small habit,

indumentum type, yellow flowers, tapered style arms, elliptic leaves, and acute pappus scales. They are also related to *Rutidosus leucantha* which has similar tapered style arms. These three species and others in SE Qld, can be distinguished as follows:

Key to *Rutidosis* species in S.E. Queensland

1. Involucral bracts golden yellow and entirely scarious; style arms short and truncate 2.
 Involucral bracts brown, scarious only at apex and margins; style arms long and tapered to a point 3.
2. Involucral bracts distinctly transversely rugose; pappus scales entire and truncate at apex **R. helichrysoides**
 Involucral bracts smooth; pappus scales ciliate and acute at apex **R. murchisonii**
3. Pappus scales obovate, rounded or truncate at apex; capitula 14–24 mm diameter; florets white or cream, 4–6 mm long; outer involucral bracts with a distinctive dark brown patch at base **R. leucantha**
 Pappus scales linear, acute; capitula 4–16 mm diameter; florets yellow, 4–4.5 mm long; outer involucral bracts more uniformly coloured 4.
4. Outer involucral bracts covered with woolly hairs; capitula 8–16 mm diam., with 33–40 florets; leaves 1.2–4.5 cm long, entire or slightly undulate; basal leaves somewhat stem clasping, with 3 veins from base **R. lanata**
 Outer involucral bracts lacking woolly hairs or with a few at base; capitula 4–10 mm diameter, with 9–22 florets; leaves 0.7–2.8 cm long, finely undulate or crisped; basal leaves not stem clasping, 1-veined **R. crispata**

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